

System and method for evaluating the quality of multi-channel audio signals

Abstract

A system for evaluating the quality of an audio test signal derived from an audio reference signal by coding and decoding, said audio test signal and said audio reference signal each comprising a plurality of channels, comprises a unit (19) for converting the audio reference signal into a first audio reference sum signal at a first reference point (17) and into a second audio reference sum signal at a second reference point (18) and for converting the audio test signal into a first audio test sum signal at the first reference point (17) and into a second audio test sum signal at the second reference point (18), the audio reference sum signals and the audio test sum signals at the first and second reference points (17, 18) being a superposition of the respective channels, which can be emitted by a plurality of loudspeakers (11 – 15), weighted with a respective transfer function (\bar{U}_{F11} - \bar{U}_{F52}) between the respective loudspeaker and the reference point in question, and a unit (20) for evaluating the quality of the audio test sum signals while taking into consideration the audio reference sum signals so as to provide an indication of the quality of the audio test signal. The system according to the present invention permits real rooms and an arbitrary number of channels of the audio test signal to be taken into account so as to execute a listening-adapted evaluation of the quality of a specific coding/decoding method.

Legend of Fig. 3:

quality evaluation for 2-channel signals

[illegible]